THE EFFECT OF FAMILY CONTROL AND MANAGEMENT ON PERFORMANCE, CAPITAL STRUCTURE, CASH HOLDING, AND CASH DIVIDENDS

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Abstract

This study investigates the effect of family firm on corporate performance and financial policy (capital structure, cash holding, and cash dividends). Using a sample of Brazilian firms, the study uses a treatment effect model to address self-selection and endogeneity problems. The results show that family firm has a negative net effect on performance. Family control has an effect on financial policies that indicate a aversive behavior to preserve control. The results indicate less problem of free cash flow and more risk-taking behavior in family-manage companies, suggesting that such aversion behavior is reduced when the family controls and manages the firm. This is the first study that takes into account the effect of family firm behavior through multiple financial policies.

Keywords: Family Firm, Performance, Capital Structure; Cash Holdings; Dividends; Risk Aversion; Risk Taking

JEL classification: G12; G15

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1. Introduction

Existing literature extensively addresses risk perception differences (Hiebl, 2013) between family-owned and managed firms and non-family-owned firms worldwide (La Porta et al., 2000) and the implications on investment decisions (Anderson et al. 2012; Croci et al., 2011; Lee, 2006). However, finance literature provides limited insight into financial outcomes and why any differences between the two types of companies affect corporate performance and their financial policies.

The research results are currently inconclusive concerning the effect of family-run firms on financial outcomes: empirical tests and relationship theories of ownership and financial outcomes reveal and predict positive, negative, or zero, relationships depending on the trade-off between alignment and entrenchment (King and Santor 2008). The ambiguity of the empirical results is attributed to two factors. First, the empirical evidence is concentrated in countries such as the US and the UK, which are characterized by firms with dispersed ownership and that comply to the rule "one share-one vote" (Gamma and Galvão, 2012), that is, the characteristics differ from most companies worldwide (La Porta et al., 2000). The literature indicates that the trade-off between the alignment of interests and expropriation by family control is a function of the institutional environment in which the company does business (Gamma and Galvão, 2012) because the right of minority shareholders and how they are protected depends significantly on the law and quality of enforcement (Shleifer and Vishny, 1986). Additionally, in a weak protective legal environment, the controlling shareholder is dominant (Gamma and Galvão, 2012), but these are environments where controlling families are also more able to expropriate minority shareholders (Faccio et al., 2001). Therefore, the question of how family firms perform in different institutional settings arises. Second, research on the outcomes of ownership, control, and family management has not adequately addressed the potential endogeneity problems (Himmelberg et al., 1999) and isolated the effects of the use of "control-enhancing mechanisms" (Gamma and Galvão, 2012; King and Santor, 2008).

Because the empirical research on this topic is currently in the development stage, this study evaluates the effect of family control and management on corporate performance and financial policies such as capital structure, cash dividends, and cash holdings. The Brazilian institutional environment is characterized by a high ownership concentration and low protection to creditors and shareholders. Therefore, Brazil is a favorable environment to expand the evidence on family control/management and its financial outcomes in emerging economies.

The results suggest that the family effect on performance and financial policies depends on the

nature of the family involvement in control and management. Family firms negatively impact corporate performance. Taken together, the results suggest that firms with family control exhibit risk aversion that is reflected in financial policies, however, that aversion behavior is reduced when the family controls and manages the firm. In contrast, firms with founding family management exhibit risk-taking behavior. This study contributes to the literature by investigating the family effect on a set of financial policies, which allows further exploration of the implications of family control/management on the financial behavior of firms. Additionally, this study adequately addresses selection bias and endogeneity problems and increases the evidence from emerging economies.

This article is organized as follows. Section 2 reviews the theories and evidence concerning family ownership and management and its impact on performance and corporate financial policies. Section 3 describes the methodological procedures. Section 4 reports the analysis and discusses the results. Section 5 presents the final considerations.

2. Literature review

2.1 The effect of family firms on corporate performance

The effect of family ownership on corporate performance and value remains unclear (Gamma and Galvão, 2012). The theoretical and empirical studies document ambiguous results. Studies report that family ownership structure leads to better, worse, or has no effect on performance. Overall, this literature has been categorized into two axes. The first, led by Berle and Means (1932), suggests a causal effect of governance variables on corporate performance. The other axis, led by Demsetz and Lehn (1985) and Demsetz and Villalonga (2001), suggests that governance variables respond endogenously to firm and industry characteristics and, therefore, without necessarily inducing an observable causal effect on performance.

Investigations following Berle and Means (1932) adopt two directions for the causal effect of family on firm performance. The first direction assumes a positive effect from the mitigating agency problem type I (principal-agent) by the alignment mechanism of interest (Gamma and Galvão, 2012). The arguments for this line suggest that the positive effect is associated with two factors. First, family firms, as insiders or blockholders controlling and operating in well-regulated and transparent markets, reduce agency costs (Anderson and Reeb, 2003) and gain advantages from the monitoring and disciplining of agents' decisions (Fama and Jensen, 1983) even when they are not involved in management (Shleifer and Vishny, 1986). Second, family firms are less myopic and have a longer investment horizon, rendering them optimal investment decision makers (King and Santor, 2008; Stein, 1989). Evidence found by Anderson and Reeb (2003) and McConaughy et al. (1998) supports this view. The other perspective assumes that the family firm may have a negative effect on performance because of type II agency problems (minority shareholder as the controlling shareholder) associated with the entrenchment mechanism (King and Santor, 2008). Entrenchment often uses "control-enhancing mechanisms" (Lease et al., 1984) and family members in management rather than more qualified external professionals (Anderson and Reeb 2003; Schulze et al., 2001; Morck et al., 1988; Shleifer and, Vishny, 1986). This entrenchment reduces market discipline by reducing the effectiveness of the board (Jensen and Ruback, 1983) and access to the managerial labor market (Holmström and Tirole, 1993). When associated with the prevalence of major shareholder family drivers in countries with weak investor protection (Gamma and Galvão, 2012), such entrenchment allows the expropriation of minority shareholders (Faccio et al., 2001) either by consumption of perquisites and excessive salaries or through the loss of lucrative business opportunities because of excessive risk aversion (Morck et al., 2000). Evidence found by Holderness and Sheehan (1988) supports this view.

The second line assumes that governance variables are endogenously determined by current and potential shareholders in the profit maximization process given observable and unobservable firm characteristics (Himmelberg et al., 1999; Demsetz, 1983). Therefore, a systematic relationship should not be observable between family control/management and firm performance (Gamma and Galvão, 2012; Demsetz and Villalonga, 2001; Demsetz and Lehn, 1985;). The central argument is that an efficient market for corporate control leads to optimal control structures in accordance with the corporate characteristics to penalize inefficient structures (King and Santor, 2008). Evidence found by Demsetz and Lehn (1985) support this view.

For King and Santor, 2008, given the opposition of theories, it is not surprising that the empirical literature has produced mixed results. The research has suggested that the benefits and costs of the family firm on performance depend on the institutional environment that firms operate (Gamma and Galvão, 2012). Given the theoretical ambiguity and inconclusive evidence on the existence and direction of the effect, the relationship between family control/management becomes an empirical subject.

2.2. The impact of family firms on financial policies

The effect of control/family management on financial policy remains largely unexplored. The literature has used the capital structure as a proxy for risk control propensity or risk aversion in family firms (Hiebl,

2013; Gamma and Galvão, 2012). The direction of the effect of ownership on the capital structure depends on the risk aversion of the manager, the monitoring and bankruptcy costs, the threat of takeovers, and growth opportunities for the firm (King and Santor 2008). From one perspective, a positive effect is expected when families prefer the use of debt to maintain control and ownership by avoiding the issuance of new shares (Stulz, 1988). From another perspective, families tend to be risk averse to the loss of control and concentrate wealth in the firm (Hiebl, 2013; Fama and Jensen, 1983) to prevent lender monitoring that reduces private control benefits (King and Santor, 2008). This risk aversion implies a reduction in leverage, increased self-financing (Gamma and Galvão, 2012), and dual-class shares (King and Santor, 2008). Some empirical evidence indicates a positive (Bianco et al., 2013; Fitzsimmons and Douglas, 2006), negative (Fitzsimmons and Douglas, 2006; Gallo and Vilaseca, 1996; Holderness and Sheehan 1988), or zero (Anderson et al., 2003) effect of family control/management on the capital structure.

Existing empirical studies focus on the effects of family firms on risk aversion, control risk propensity, expropriation of minority shareholders, and other agency problems. These studies observe behavior through the capital structure choice of firms. However, we consider it more appropriate to incorporate the decisions on cash holdings and cash dividends for corroborative evidence.

The capital structure and dividends can be used to reduce the free cash flow agency costs, for example, the private benefits of control in family firms (Gonzalez et al., 2014; Pindado et al., 2012; Wei et al., 2011; Setia-Atmaja, 2010). This behavior would imply a reduction in managers' cash holdings (Steijvers and Niskanen, 2013; Jensen, 1986). However, the interplay between debt, cash holdings, and dividends may reflect the risk profile of the controlling/management family or difficulty in accessing external financing. In these cases, firms can maintain high levels of cash holdings, low dividends, and low leverage to maintain control and reduce the need to dilute its control rights (Anderson and Hamadi, 2009). Similarly, firm family control/management facing financial constraints may have low levels of leverage, cash dividends, and high levels of cash holdings (Almeida et al., 2004;. Fazzari et al., 1988.). Firms with founding family control/may be at risk because of overconfidence or optimism (Hiebl, 2013), which implies a greater propensity towards leverage without the corresponding need to maintain liquidity by increase cash holdings and reducing cash dividends. However, there is evidence that family firms may be overly risk averse, which implies a higher level of cash holdings and a lower level of leverage (Anderson et al., 2003; Anderson and Hamadi, 2009).

The advantages and disadvantages of the family firm co-exist (Wei et al., 2011), and the ultimate effect of family control/management on the capital structure, cash holdings, and cash dividends depends on the extent of family involvement in management, which dictates the costs and net benefits that are dominant in the family firm. Thus, the prevalence of certain capital structures and the factors that determine those structures is an empirical question (Gonzalez et al., 2014;. Anderson and Hamadi, 2009). King and Santor 2008 found that if a direction for the effect of family control/management on capital structure cannot be established, empirical test results should be used as evidence.

3. Methodology

3.1 Empirical strategy

Consistent with King and Santor (2008) and Miller et al. (2007), and following the best practices for ownership structure estimation and performance relationships to mitigate omitted variable bias and problems of endogeneity (Wang and Shailer 2013), we adopted panel data specification with robust standard errors clustered by firm. The specification adopted is the most appropriate for this study because (1) the ownership structure, corporate performance, capital structure, cash holdings, and cash dividends can be determined by unobservable characteristics, and (2) we can use time invariants or variables that exhibit low variation over the study period (e.g., industry dummies, control rights/cash flow, and control-cash flow wedge), or variables close to time-invariants (e.g., dummies that identify control/family management).

Families are potentially in a position to determine ownership structure and financial policies to maintain control and/or management of the firm. The decision to maintain control and/or management can be determined by corporate characteristics such as performance, capital structure, cash holding, and dividends. Therefore, there may be a potential endogeneity problem from self-selection in the study of the effect of control/family management on performance and corporate financial policy. The panel data model addresses endogeneity associated with specific effects of the unobservable firm but does not adequately address the bias of self-selection. Considering that the explanatory effect of the interest variable in this study (family control or management) is binary, consistent with Miller et al. (2007), we adopted the treatment effect model (TEM) estimated by maximum likelihood and standard errors clustered at the firm level to manage the potential self-selection bias. The treatment group is identified by a dummy variable equal to one for family control/management companies. The outcome variables are the same, that is, Tobin's Q, return on assets (ROA), total and long-term debt, cash holding, and cash dividends.

The TEM is expressed by two equations defined in two stages (estimation of selection model and outcome model). In the first stage of the model, we applied a probit regression to a selection model where family control/management is determined by a selected set of variables as follows:

$$FAMILY\ FIRM_{i,t} = \alpha + \beta` x_{i,t} + \sum_{j} IndustryDummy + \sum_{t} YearDummy + \varepsilon_{i,t} \quad (1)$$

where ($FAMILY\ FIRM_{i,t}$) is a binary variable with a value of one if the company has family control and/or management and zero otherwise. The vector $x_{i,t}$ of the variable selection considers all the predictors that meet significant components of the determinants of family control/management, such as cash holding (Miller et al., 2007), growth sales (Villalonga and Amit, 2006), age, and size of the firm (Zhou, 2012; Anderson and Reeb, 2003). As a complement, we added three other determinants of family control/management as selection variables not included in the outcome model but considered important in the literature (Zhou, 2012; Villalonga and Amit, 2006; Anderson and Reeb, 2003; Demsetz and Villalonga, 2001; Demsetz and Lehn, 1985); government regulation ($REGUL_{i,t}$); volatility of stock price ($VOL_{i,t}$); asset size squared ($SIZE^2{}_{i,t}$), and a dummy for companies with a founding age above/below the median sample ($OLD\ FIRM_{i,t}$).

The second stage of TEM captures the effect of family control/management on performance and corporate financial policy (outcome models) according to equations 2 to 4.

Because of the multidimensional nature of corporate performance, to examine the impact of family control/management on performance, we adopt two proxies: Tobin's Q and ROA. The proxy Tobin's Q is a forward-looking perspective to reflect the market value while the proxy ROA adopts a backward-looking perspective by reflecting profitability and productivity. The ROA measure is susceptible to manipulation and managerial accounting differences while Tobin's Q may reflect the market sentiment (Wang and Shailer, 2013). Therefore, we use both measures. To examine the effect of family control/management on performance, we estimate the following outcome model using ordinary least squares:

$$PERFORMANCE_{i,t} = \alpha + \beta` x_{i,t} + \delta FF_{i,t} + \sum_{j} IndustryDummy + \sum_{t} YearDummy + \varepsilon_{i,t} \quad (2)$$

where performance ($Performance_{i,t}$) is defined operationally as Tobin's Q ($Q_{i,t}$) or return on assets ($ROA_{i,t}$). $x_{i,t}$ is a set of corporate features documented in the literature as determinants of corporate performance that serve as control variables. Among the control variables are size ($SIZE_{i,t}$), age ($AGE_{i,t}$), annual sales growth ($GROWTH_{i,t}$), total financial debt ($TOTAL\ DEBT_{i,t}$), quality of corporate governance ($GOVERNACE\ QUALITY_{i,t}$), capital expenditures ($CAPEX_{i,t}$), operational business risk ($OPERATIONAL\ RISK_{i,t}$), control rights ($CONTROL\ RIGHTS_{i,t}$), cash flow rights ($CASH\ FLOW\ RIGHTS_{i,t}$), and wedge between cash flow and control rights ($CONTROL - CASH\ FLOW\ WEDGE$). The firm family ($FF_{i,t}$) is a dummy variable that identifies the type of family control/management of the firm (one for family control/management and 0 otherwise). We adopt a family control ($FAMILY\ CONTROL_{i,t}$) and two family management settings, a wide ($FAMILY\ MANAGEMENT_{i,t}$) and restricted to founding family ($FOUNDER\ FAMILY\ MANAGEMENT_{i,t}$). Table 1 lists the definitions of the variables. ε_ (i, t) is the residual mean-zero adjusted to the specific heterogeneity of the firm.

To examine the effect of family control/management on the capital structure, we estimate the following outcome model:

$$LEVERAGE_{i,t} = \alpha + \beta` x_{i,t} + \delta FF_{i,t} + \sum_{j} IndustryDummy + \sum_{t} YearDummy + \varepsilon_{i,t} \quad (3)$$

where $LEVERAGE_{i,t}$ is defined as total financial debt ($TOTAL\ DEBT_{i,t}$) and financial long-term debt ($LONG - TERM\ DEBT_{i,t}$). The vector $x_{i,t}$ of control variables is the same as that in equation 1, except we exclude total financial debt and include cash holding ($CASH\ HOLDING_{i,t}$) and tax shield ($TS_{i,t}$).

To examine the effect of family control/management on cash holding, we estimate the following outcome model:

$$CASH\ HOLDING_{i,t} = \alpha + \beta` x_{i,t} + \delta FF_{i,t} + \sum_{j} IndustryDummy + \sum_{t} YearDummy + \varepsilon_{i,t} \quad (4)$$

where $CASH\ HOLDING_{i,t}$ is defined as cash and short-term investments to total assets. The vector $x_{i,t}$ of variables is the same as that of equation 1, except we exclude cash holding and non-equity tax shield and include short-term financial debt ($SHORT-TERM\ DEBT_{i,t}$) and other liquid assets ($OLA_{i,t}$).

To examine the effect of family control/management on dividends, we estimate the following outcome model:

$$CashDividend_{i,t} = \alpha + \beta` x_{i,t} + \delta FF_{i,t} + \sum_{j} IndustryDummy + \sum_{t} YearDummy + \varepsilon_{i,t} \quad (5)$$

where $CashDividend_{i,t}$is defined as dividends and interest on shareholders' equity to sales. The vector $x_{i,t}$ of control variables is the same as that of equation 3, except we exclude the short-term financial debt variable and add total financial debt.

3.2 Sample, data, and operational definition of variables

The population of this study is composed of all publicly traded non-financial Brazilian companies. All companies have annual financial information and a market, control/ownership structure with data available from the Economática® database, annual reports (IAN), and reference forms published by the Securities and Exchange Commission (CVM) and the Stock Exchange, Commodities and Futures Exchange (BMandFBovespa) from the year 2005 to the year 2012.

We exclude the firm-year observations with at least one of the following restrictions: (a) annual net sales and/or total asset growth over 100% to eliminate observations of companies with changes in business fundamentals; (b) the variable Tobin's Q with a value above 10 to avoid potential measurement errors. Continuous variables were winsorized adopting the 2.5% limit of observations in each tail.

Table 1 shows the definitions of the variables used in the empirical tests.

Table 1. Variable definitions

Variables	Definition
Age	Natural logarithm of firm age since its foundation.
Capex	Ratio of capital expenditures to total assets.
Cash Dividend	Ratio of cash dividend plus interest on equity to sales.
Cash Flow Rights	Percentage of shares owned by the controlling shareholder.
Cash Holding	Ratio of cash and short-term investments to total assets.
Control Rights	Percentage of shares with voting rights owned by the controlling shareholder.
Family Control	Dummy variable that takes the value of one if the individuals or individual of the same family has 50% or more of shares with voting rights and zero otherwise.
Family Management	Dummy variable that takes the value of one if, in a familiar controlling firm, the same family member is the CEO and/or the President of the Board of Directors and zero otherwise.
Founder Family Management	Dummy variable that takes the value of one if, in a familiar controlling firm, the same founder family member is the CEO and/or the President of the Board of Directors and zero otherwise.
Governance Quality	Dummy variable that takes the value one if the firm is listed on the three high-governance listing of BM&Fbovespa and zero otherwise.
Long-term Financial Debt	Ratio of long-term financial debt to total assets.
Operational Risk	Standard deviation of ROA during the sample time series.
Other Liquid Assets	Ratio of inventories and accounts receivables to total assets.
ROA	Ratio of EBITDA to total assets.
Sales Growth	Annual sales growth rate.
Short-term Financial Debt	Ratio of short-term financial debt to total assets.
Size	Natural logarithm of total assets.
Tangibility	Ratio of fixed assets to total assets.
Tax Shield	Ratio of the difference between EBIT and the ratio of income tax payments to corporate tax rate to sales.
Tobin's Q	Ratio of the market value of assets to total assets. The market value of assets is defined as total assets minus equity plus the market value of equity.
Total Financial Debt	Ratio of total financial debt to total assets.
Wedge Control-Cash Flow Rights	Difference between control rights and cash flow rights minus one.

Table 2 reports the industrial distribution of observations for the full sample and between different definitions of companies with family control/management. We observe a high variation in the occurrence of family control/management between the industries classified by NAICS-1. Family businesses are more concentrated among the manufacturing and trade industries and less concentrated among utility industries such as energy and telecommunications. This distribution pattern corresponds with international studies (King and Santor, 2008). The prevalence of asymmetric family control/management companies across industries suggests the need to control the industry in the multivariate analysis.

Table 2. Distribution of observations by industry

Industries	Whole Sample		Family Control		Family Management		Founder Family Management	
	Nº Obs.	%	Nº Obs.	%	Nº Obs.	%	Nº Obs.	%
Construction and Engineering	104	6..6%	52	7.7%	92	10.5%	53	24.0%
Diversified	73	4..6%	27	4.0%	55	6.3%	21	9.5%
Education Services	20	1..3%	6	0.9%	15	1.7%	3	1.4%
Farming	23	1..5%	17	2.5%	18	2.1%	8	3.6%
Health	14	0..9%	5	0.7%	7	0.8%	4	1.8%
Hotels and Restaurants	4	0.3%	0	0.0%	4	0.5%	0	0.0%
Manufacturing	717	45.6%	422	62.3%	499	57.1%	89	40.3%
Mining	25	1.6%	3	0.4%	5	0.6%	3	1.4%
Real Estate	41	2.6%	11	1.6%	27	3.1%	19	8.6%
Retail and Distribution	79	5.0%	49	7.2%	50	5.7%	1	0.5%
Services	27	1.7%	15	2.2%	17	1.9%	14	6.3%
Telecommunications and Media	99	6.3%	12	1.8%	20	2.3%	0	0.0%
Travel, Entertainment, and Leisure	2	0.1%	0	0.0%	0	0.0%	0	0.0%
Transportation	65	4.1%	27	4.0%	35	4.0%	3	1.4%
Utilities	278	17.7%	31	4.6%	30	3.4%	3	1.4%
Total	1571	100	677	100	874	100	221	100

4. Analysis and discussion of results

Table 3 shows the descriptive statistics and univariate tests for the variables used for the analysis period from the year 2005 to the year 2012. We use a parametric test of mean differences to detect differences in these variables according to family control/management and other types of control or management. We identified systematic differences between companies with family control/management compared to other ownership structures, regardless of the criteria used in the classification.

Companies with family control/management exhibit the following characteristics: a lower Tobin's Q, except for firms with founder management; a lower ROA; lower total financial debt except for firms with founder family management; lower short-term financial debt; lower long-term financial debt except for firms with founder management; greater cash holding; fewer control rights except for family-controlled firms; fewer cash flow rights; greater wedge between control and cash flow right except for firms with founder family management; smaller size; greater other liquid assets; greater maturity except for firms with founder family management; fewer dividends on sales; fewer tangible assets, and lower volatility of cash flows. The level of sales growth and corporate governance was significantly higher for companies with founder family management.

Table 3. Descriptive Statistics

	[A]	[B]	[A]≠[B]	[C]	[D]	[C]≠[D]	[E]	[F]	[E]≠[F]
	FC	Others		FM	Others		FFM	Others	
Age	1.561	1.416	0.00***	1.527	1.417	0.00***	1.270	1.512	0.00***
	(0.39)	(0.42)		(0.39)	(0.43)		(0.43)	(0.40)	
Capex	0.143	0.149	0.561	0.139	0.156	0.08*	0.153	0.145	0.60
	(0.21)	(0.17)		(0.21)	(0.17)		(0.25)	(0.18)	
Cash Dividend	0.035	0.070	0.00***	0.034	0.080	0.00***	0.034	0.058	0.00***
	(0.07)	(0.09)		(0.07)	(0.11)		(0.07)	(0.09)	
Cash Flow Rights	0.528	0.571	0.00***	0.51	0.605	0.00***	0.514	0.559	0.00***
	(0.19)	(0.23)		(0.20)	(0.22)		(0.16)	(0.22)	
Cash Holding	0.111	0.090	0.00***	0.105	0.090	0.00***	0.113	0.096	0.03**
	(0.12)	(0.09)		(0.12)	(0.08)		(0.11)	(0.11)	
Control Rights	0.725	0.685	0.00***	0.669	0.743	0.00***	0.628	0.714	0.00***
	(0.15)	(0.22)		(0.19)	(0.20)		(0.20)	(0.19)	
Governance Quality	0.447	0.521	0.00***	0.480	0.500	0.427	0.683	0.457	0.00***
	(0.49)	(0.49)		(0.49)	(0.50)		(0.46)	(0.49)	
Long-term Debt	0.160	0.174	0.03**	0.160	0.177	0.01**	0.169	0.168	0.85
	(0.14)	(0.12)		(0.14)	(0.12)		(0.14)	(0.13)	
Operational Risk	0.057	0.067	0.02**	0.061	0.066	0.257	0.046	0.066	0.00***
	(0.08)	(0.08)		(0.08)	(0.08)		(0.03)	(0.09)	
Other Liquid Assets	0.184	0.124	0.00***	0.191	0.098	0.00***	0.237	0.136	0.00***
	(0.16)	(0.15)		(0.17)	(0.13)		(0.18)	(0.15)	
ROA	0.094	0.127	0.00***	0.091	0.141	0.00***	0.090	0.117	0.00***
	(0.09)	(0.13)		(0.11)	(0.12)		(0.07)	(0.12)	
Sales Growth	0.099	0.113	0.249	0.107	0.107	0.959	0.190	0.093	0.00***
	(0.23)	(0.24)		(0.25)	(0.21)		(0.30)	(0.22)	
Short-term Debt	0.114	0.083	0.00***	0.114	0.075	0.00***	0.112	0.094	0.01**
	(0.10)	(0.09)		(0.10)	(0.08)		(0.10)	(0.09)	
Size	6.009	6.440	0.00***	6.028	6.539	0.00***	6.090	6.281	0.00***
	(0.71)	(0.78)		(0.76)	(0.72)		(0.60)	(0.81)	
Tangibility	0.304	0.350	0.00***	0.299	0.369	0.00***	0.215	0.349	0.00***
	(0.20)	(0.24)		(0.21)	(0.23)		(0.21)	(0.22)	
Tax Shield	-0.014	-0.030	0.04**	-0.011	-0.038	0.00***	-0.031	-0.022	0.35
	(0.15)	(0.14)		(0.15)	(0.14)		(0.14)	(0.14)	
Tobin`s Q	0.978	1.235	0.00***	1.056	1.209	0.00***	1.183	1.115	0.30
	(0.72)	(1.04)		(0.87)	(0.97)		(0.87)	(0.93)	
Total Debt	0.274	0.258	0.06*	0.274	0.253	0.01**	0.282	0.262	0.11
	(0.18)	(0.16)		(0.17)	(0.15)		(0.18)	(0.16)	
Wedge Control-Cash Flow	0.196	0.114	0.00***	0.158	0.138	0.03**	0.113	0.155	0.00***
	(0.19)	(0.17)		(0.18)	(0.18)		(0.17)	(0.18)	
Firm-years	677	894		874	697		221	1350	
Firms	153	194		183	149		57	264	

Note: FC, FM and FFM indicate family control, family management, and founding family management, respectively. Average (above) and standard deviation (bottom, in parenthesis). ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3 also shows that family control/management companies use more control-enhancing mechanisms (such as dual class) that create the wedge between control rights and cash flow. The fact that family companies posses greater wedge, fewer control rights, higher debt, higher cash holding, and lower dividend payments is consistent with the view that the family company adopts control-enhancing mechanisms to ensure company growth without assuming the risk of loss of control.

Table 4. Effect of family control on performance and cash dividends

	Q		ROA		CASH DIVIDEND	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Family Control		-0.4639***		-0.0037		0.0876***
		(-2.66)		(-0.02)		(6.30)
Cash Flow Rights	0.7492*	0.3853**	0.8247	0.0257	0.6773*	0.0088
	(1.68)	(2.12)	(1.62)	(0.51)	(1.65)	(-0.37)
Wedge Control-Cash Flow	2.2323***	-0.3502*	2.1016***	0.0138	1.6337***	-0.0454
	(3.79)	(-1.80)	(3.31)	(0.12)	(2.96)	(-1.57)
Age	-0.1426	-0.0274	-0.1242	0.0038	0.1492	-0.0247*
	(-0.54)	(-0.28)	(-0.44)	(0.30)	(0.60)	(-1.75)
Capex	0.9465***	-0.1733	0.7648**	-0.0224	0.7638**	0.0594**
	(3.02)	(-1.23)	(2.52)	(-0.49)	(2.36)	(2.40)
Cash Holding	1.4973***	0.8544**	1.5876***	0.0438	1.9162***	0.0548
	(2.83)	(2.36)	(2.80)	(0.46)	(3.64)	(0.97)
Governance Quality	-0.3389	0.1342	-0.2935	-0.0056	-0.2400	-0.0144
	(-1.44)	(1.21)	(-1.09)	(-0.38)	(-1.12)	(-1.19)
Cash Dividends	-1.6342*	2.0670***				
	(-1.70)	(4.18)				
Growth Sales	0.0932	0.1050	0.1323	0.0619***	0.0696	-0.0377***
	(0.56)	(1.01)	(0.79)	(3.35)	(0.41)	(-3.43)
Operational Risk	-2.9878***	0.5003	-2.9142*	-0.1100	-2.7656**	0.1064**
	(-2.03)	(1.50)	(-1.78)	(-0.63)	(-2.40)	(2.46)
Tobin's Q			-0.2252	0.0527***	-0.2661***	0.0290***
			(-1.81)	(3.19)	(-3.08)	(4.89)
Cash Flow	-0.1094	2.5174***			-0.8787	0.1344***
	(-0.19)	(-4.70)			(-1.33)	(2.81)
Size	13.497	-0.0927	1.1129***	0.0215	-0.4021	0.0208***
	(0.92)	(-1.35)	(4.94)	(1.22)	(0.40)	(2.64)
Total Debt	0.6907*	0.3994**	0.8194**	-0.0475	0.4438	-0.0699***
	(1.79)	(1.98)	(1.97)	(-1.11)	(1.15)	(-2.70)
$Size^2$	-0.1243		-0.1088***		-0.0465	
	(-1.05)		(-4.08)		(-0.56)	
Share Value Volatility	-0.0041		0.0074		0.0085	
	(-0.26)		(0.24)		(0.64)	
Old Firm	0.3212		0.2530		0.1474	
	(1.42)		(1.04)		(0.92)	
Constant	-44.959	1.6170***	-3.5051**	-0.1130	-15.284	-0.1216**
	(-0.99)	(3.20)	(-2.39)	(-0.78)	(-0.48)	(-2.31)
Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes
Chi-square Test	437.68		416.65		173.20	
Log pseudo likelihood	-2447.86		672.17		1163.78	
Lambda	2.2654**		0.0439		-6.3913***	
Wald Test Indep. Eqs. (chi2)	3.87**		0.9649		32.03***	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 5. Effect of family control on capital structure and cash holdings

	TOTAL DEBT		LONG-TERM DEBT		CASH HOLDINGS	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Family Control		-0.0881		-0.0628*		0.0774***
		(-1.27)		(-1.72)		(2.73)
Cash Flow Rights	0.8836*	-0.0309	0.8293*	-0.0043	0.8072*	-0.0347
	(1.89)	(-0.58)	(1.82)	(-0.11)	(1.80)	(-1.34)
Wedge Control-Cash Flow	2.0168***	-0.053	1.9985***	-0.0256	2.070***	-0.0659*
	(3.28)	(-0.70)	(3.24)	(-0.49)	(3.50)	(-1.64)
Age	-0.1641	-0.0045	-0.1347	-0.004	-0.2134	-0.0133
	(-0.67)	(-0.19)	(-0.54)	(-0.23)	(-0.83)	(-1.21)
Capex	0.9594***	0.0928**	-0.9314***	0.1090***	0.8415***	-0.0845***
	(3.18)	(-2.50)	(3.06)	(4.17)	(2.71)	(-3.53)
Cash Holding	1.5025***	-0.0057	1.5260***	0.0747		
	(2.83)	(-0.08)	(2.89)	(1.36)		
Governance Quality	-0.2714	-0.0064	-0.2773	0.0018	-0.2426	0.0400***
	(-1.14)	-0.58	(-1.15)	(0.10)	(-1.03)	(3.75)
Cash Dividends	-2.0717**	-0.0407	-2.1367**	0.0348	-0.7664	0.2116**
	(-2.27)	(-0.35)	(-2.26)	(0.43)	(-0.82)	(2.34)
Growth Sales	0.1137	-0.0157	0.1326	-0.0156	0.1164	0.0300***
	(0.63)	(-0.76)	(0.75)	(-1.11)	(0.69)	(3.03)
Operational Risk	-2.7299**	-0.1359	-2.9100**	-0.0777	-2.9661**	-0.0191
	(-2.06)	(-1.12)	(-2.18)	(-0.84)	(-2.04)	(-0.29)
Tobin's Q	-0.2148**	0.0064	-0.2035**	-0.0023	-0.172**	0.0166***
	(-2.27)	(-0.48)	(-2.27)	(-0.32)	(-2.29)	(2.62)
Cash Flow	0.3501	-0.0911	0.2778	0.0142	0.1075	0.0020
	(0.55)	(-1.13)	(0.48)	(0.29)	(0.20)	(0.05)
Size	0.8235	0.0341**	1.2720	0.0511***	2.1575	-0.0044
	(0.62)	(2.16)	(0.89)	(4.47)	(1.43)	(-0.51)
Short-term Debt					0.3913	-0.1138**
					(0.51)	(-2.46)
Tax Shield	-0.4031	0.1508***	-0.4099	0.1037***		
	(-1.54)	(4.34)	(-1.55)	(3.98)		
Other Liquid Assets					0.1822	-0.1428***
					(0.43)	(-4.11)
$Size^2$	-0.0850		-0.1215		2.1575	
	(-0.80)		(-1.05)		(1.43)	
Share Value Volatility	0.0123		0.0092		0.0104	
	(0.92)		(0.74)		(0.80)	
Old Firm	0.2662		0.2473		0.2843	
	(1.30)		(1.22)		(1.30)	
Constant	-2.4894	0.0691	-3.8291	-0.1359*	-6.4969	0.1380**
	(-0.60)	(0.62)	(-0.86)	(-1.77)	(-1.39)	(1.96)
Industry and Year Effect	Yes	Yes	Yes	Yes	Yes	Yes
Chi-square Test	405.24		353.44		223.29	
Log pseudo likelihood	12.4575		454.56		725.62	
Lambda	1.8291*		2.4729**		-1.8214*	
Wald Test Index. Eqs. (chi2)	3.09*		5.70**		3.41*	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6. Effect of family management on performance and cash dividends

	Q		ROA		CASH DIVIDENDS	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Family Management		-0.2430		-0.0979***		0.0907***
		(-0.56)		(-3.11)		(8.20)
Cash Flow Rights	-1.0165**	0.2108	-0.9195**	-0.0014	-1.0876***	0.0377
	(-2.25)	(0.98)	(-2.10)	(-0.05)	(-2.73)	(1.49)
Wedge Control-Cash Flow	-0.4637	-0.6730***	-0.4333	-0.0002	-0.9174***	0.0174
	(-0.85)	(-3.51)	(-0.82)	(-0.01)	(-1.90)	(0.58)
Age	0.1089	-0.0377	0.0690	0.0080	0.3536	-0.0249*
	(-0.36)	(-0.38)	(0.26)	(0.67)	(1.42)	(-1.73)
Capex	0.5766*	-0.2701*	0.4739	-0.0158	0.3208	0.0732***
	(1.81)	(-1.90)	(1.41)	(-0.75)	(0.88)	(2.72)
Cash Holding	1.3079**	0.6911*	1.0075**	0.0672*	1.3788**	0.0768
	(2.38)	(1.69)	(2.02)	(1.78)	(2.44)	(1.31)
Governance Quality	-0.2756	0.1557	-0.1835	-0.0098	-0.2269	-0.0155
	(-1.16)	(1.28)	(-0.82)	(-0.87)	(-1.12)	(-1.27)
Cash Dividends	-3.1841***	2.0819***				
	(-3.57)	(4.06)				
Growth Sales	0.0449	0.0990	0.0990	0.0641***	0.0097	-0.0379***
	(0.25)	(0.96)	(0.54)	(3.49)	(0.06)	(-3.37)
Operational Risk	-2.1288*	0.7687**	-2.7719**	-0.1508**	-1.8566**	0.0815**
	(-1.95)	(1.96)	(-2.47)	(-2.07)	(-2.27)	(2.26)
Tobin's Q			-0.0895	0.0493***	-0.1786**	0.0255***
			(-1.26)	(6.29)	(-2.17)	(4.20)
Cash Flow	-0.2624	2.5889***			-1.0001*	0.1527***
	(-0.44)	(4.46)			(-1.72)	(3.20)
Size	-2.0697	-0.0911	-3.6266**	0.0110	-1.9792*	0.0241***
	(-1.60)	(-1.24)	(-2.57)	(1.16)	(-2.09)	(3.07)
Total Financial Debt	0.7740*	0.3899*	0.9587**	-0.0203	0.5340	-0.0796***
	(1.67)	(1.91)	(2.29)	(-0.66)	(1.30)	(-2.98)
$Size^2$	0.1406		0.2556**		0.1338*	
	(1.41)		(2.37)		(1.88)	
Share Value Volatility	-0.0066		-0.0075		0.0096	
	(-0.25)		(-0.58)		(0.75)	
Old Firm	-0.0073		-0.0256		-0.0978	
	(-0.03)		(-0.12)		(-0.68)	
Constant	8.1698***	1.7002*	13.2560***	-0.0979***	7.7851**	-0.1956***
	(1.98)	(2.46)	(2.94)	(-3.11)	(2.49)	(-3.60)
Industry and Year Effect	Yes		Yes		Yes	
Chi-square Test	397.91		338.28		190.87	
Log pseudo likelihood	-2428.74		691.55		1206.13	
Lambda	0.4934		2.9830***		-8.2771***	
Wald Test Indep. Eqs. (chi2)	0.25		7.06***		60.50***	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Effect of family management on capital structure and cash holdings

	TOTAL DEBT		LONG-TERM DEBT		CASH HOLDINGS	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Family Management		0.1126*		0.0495		-0.1327***
		(1.86)		(1.08)		(-6.86)
Cash Flow Rights	-1.1899***	-0.0217	-1.1454**	-0.0060	-1.1245***	-0.0507
	(-2.57)	(-0.43)	(-2.49)	(-0.17)	(-2.78)	(-1.61)
Wedge Control-Cash Flow	-0.6721	-0.0848	-0.6490	-0.0530	-0.9473*	-0.0383
	(-1.24)	(-1.57)	(-1.18)	(-1.27)	(-1.77)	(-0.90)
Age	0.2414	-0.0103	0.1842	-0.0073	0.2078	-0.0088
	(0.79)	(-0.45)	(0.61)	(-0.45)	(0.82)	(-0.58)
Capex	0.6141*	0.0564*	0.6228*	0.0872***	0.5947**	-0.0443*
	(1.86)	(1.80)	(1.90)	(3.77)	(1.95)	(-1.66)
Cash Holding	1.2478**	-0.0816	1.2415**	0.0293		
	(2.12)	(-1.14)	(2.17)	(0.55)		
Governance Quality	-0.3154	0.0054	-0.2935	0.0087	-0.2655	0.0296*
	(-1.29)	(0.24)	(-1.20)	(0.51)	(-1.30)	(1.94)
Cash Dividends	-4.0280***	0.0859	-3.9054***	0.1024	-2.6017**	0.1115
	(-4.37)	(0.72)	(-4.26)	(1.17)	(-2.33)	(1.03)
Growth Sales	0.0144	-0.0205	0.0325	-0.0184	-0.0010	0.0336***
	(0.08)	(-1.04)	(0.18)	(-1.37)	(-0.01)	(3.00)
Operational Risk	-1.9484**	-0.0231	-1.9730*	-0.0107	-1.8665**	-0.1410*
	(-2.00)	(-0.24)	(-1.86)	(-0.12)	(-2.15)	(-1.83)
Tobin's Q	-0.0346	0.0103	-0.0293	0.0018	-0.0507	0.0110*
	(-0.47)	(1.25)	(-0.39)	(0.28)	(-0.72)	(1.67)
Cash Flow	-0.2186	-0.0844	-0.2027	0.0159	-0.1089	0.0003
	(-0.38)	(1.15)	(-0.36)	(0.34)	(-0.22)	(0.01)
Size	-1.7678	0.0496***	-1.9817	0.0595***	-2.9577***	-0.0211*
	(-1.37)	(3.39)	(-1.55)	(5.13)	(-3.49)	(-1.95)
Short-term Debt					-0.2971	-0.0834*
					(-0.44)	(-1.68)
Tax Shield	-0.2470	0.1654***	-0.2371	0.1153***		
	(-1.03)	(5.14)	(-0.97)	(4.68)		
Other Liquid Assets					0.1697	-0.1297***
					(0.42)	(-3.48)
$Size^2$	0.1196		0.1361		0.2164***	
	(1.20)		(1.38)		(3.32)	
Share Value Volatility	-0.0032		-0.0013		0.0042	
	(-0.22)		(-0.09)		(0.40)	
Old Firm	-0.1712		-0.1207		-0.2554*	
	(-0.69)		(-0.47)		(-1.67)	
Constant	7.3572*	-0.1315	8.0240**	-0.2383**	10.9299***	0.3650***
	(1.80)	(1.02)	(1.97)	(-2.37)	(3.99)	(4.03)
Industry and Year Effect	Yes		Yes		Yes	
Chi-square Test	366.64		419.61		202.91	
Log pseudo likelihood	33.6779		473.89		765.96	
Lambda	-1.4354		-0.5523		7.3095***	
Wald Test Indep. Eqs. (chi2)	1.99		0.30		48.83***	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8. Effect of founder family management on performance and cash dividends

	Q		ROA		CASH DIVIDENDS	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Founder Family Management		-0.0287		-0.1392***		-0.0459*
		(-0.05)		(-5.35)		(-1.79)
Cash Flow Rights	-0.0804	0.274	0.2492	0.0226	-0.0439	0.0127
	(-0.16)	-1.64	(0.58)	(0.86)	(-0.09)	(0.61)
Control-Cash Flow Wedge	0.1722	-0.6774	0.2091	0.0111	0.2944	0.0065
	(0.25)	(-3.60)	(0.35)	(0.37)	(0.42)	(0.26)
Age	-0.4252	-0.0489	-0.3307	-0.0128	-0.5186*	-0.0265*
	(-1.34)	(-0.40)	(-1.39)	(-1.04)	(-1.65)	(-1.90)
Capex	0.0218	-0.3037	0.1577	-0.0295	-0.1516	0.0771***
	(0.06)	(-2.10)	(0.50)	(-1.46)	(-0.40)	(3.45)
Cash Holding	0.9668	0.6153*	0.9277	0.0528	0.3144	0.1036*
	(1.11)	(1.67)	(1.43)	(1.27)	(0.36)	(1.82)
Governance Quality	0.3454	0.1727	0.3322	0.0043	0.3597	-0.0166
	(1.19)	(1.47)	(1.54)	(0.41)	(1.29)	(-1.60)
Cash Dividends	-1.1589	2.2434***				
	(-1.11)	(4.01)				
Growth Sales	0.4509*	0.0981	0.7369***	0.0778***	0.5015**	-0.0293***
	(1.74)	(0.95)	(3.35)	(4.10)	(2.09)	(-2.91)
Operational Risk	-6.9505	0.8714**	-10.6313***	-0.1413**	-6.1008**	0.0275
	(-1.52)	(2.26)	(-4.30)	(-2.22)	(-2.25)	(1.10)
Tobin's Q			0.1464*	0.0535***	0.0702	0.0233***
			(1.65)	(6.72)	(0.70)	(4.61)
Cash Flow	-0.1611	2.5549***			0.0013	0.1346***
	(-0.20)	(4.41)			(0.00)	(3.31)
Size	0.6162	-0.0685	-0.0205	0.0162*	0.6524	0.0126*
	(0.37)	(-0.86)	(-0.02)	(1.77)	(0.43)	(1.92)
Total Financial Debt	0.6852	0.3359	0.8427*	-0.0266	0.8888*	-0.0478**
	(1.27)	(1.39)	(1.77)	(-0.78)	(1.80)	(-2.11)
$Size^2$	-0.0875		-0.0323		-0.0911	
	(-0.67)		(-0.31)		(-0.79)	
Share Value Volatility	0.0343		0.0295**		0.0345*	
	(1.14)		(2.14)		(1.89)	
Old Firm	-0.2947		-0.2076		-0.3355	
	(-1.02)		(-1.04)		(-1.23)	
Constant	-0.7943	1.3959**	0.4765	-0.0341	-0.9864	-0.0440
	(-0.15)	(2.17)	(0.11)	(-0.49)	(-0.20)	(-0.92)
Industry and Year Effect	Yes		Yes		Yes	
Chi-square Test	418.82		253.76		228.66	
Log pseudo likelihood	-2133.74		1016.13		1461.44	
Lambda	0.2046		5.3443***		1.3731	
Wald Test Indep. Eqs. (chi2)	0.04		25.29***		1.84	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9. Effect of founder family management on capital structure and cash holdings

	TOTAL DEBT		LONG-TERM DEBT		CASH HOLDINGS	
	Selection Model	Outcome Model	Selection Model	Outcome Model	Selection Model	Outcome Model
Founder Family Management		0.1942***		0.1318***		-0.0037
		(2.71)		(3.45)		(-0.14)
Cash Flow Rights	-0.0985	-0.0492	-0.1218	-0.0173	0.0803	-0.0153
	(-0.21)	(-1.01)	(-0.26)	(-0.49)	(0.16)	(-0.64)
Control-Cash Flow Wedge	0.2409	-0.0987*	0.4011	-0.0582	0.2886	-0.0205
	(-0.39)	(-1.72)	(0.66)	(-1.33)	(0.43)	(-0.62)
Age	-0.2582	0.0169	-0.3436	0.0104	-0.5265	-0.0121
	(-0.79)	(0.71)	(-1.07)	(0.61)	(-1.57)	(-0.98)
Capex	0.1018	0.0748**	0.0677	0.0958***	0.3749	-0.0635***
	-0.31	(2.35)	(0.20)	(4.08)	(1.06)	(-2.87)
Cash Holding	0.4785	-0.0690	0.4482	0.0306		
	(0.69)	(-0.91)	(0.63)	(0.56)		
Governance Quality	0.4784*	-0.0138	0.4075	-0.0027	0.3593	0.0364***
	(1.80)	(-0.55)	(1.56)	(-0.15)	(1.24)	(3.27)
Cash Dividends	-2.4232**	0.0512	-2.0650*	0.0979	-1.7625	0.1964*
	(-2.28)	(0.47)	(-1.90)	(1.23)	(-1.25)	(1.95)
Growth Sales	0.2932	-0.0385*	0.3849**	-0.0316**	0.3689	0.0325***
	(1.48)	(-1.70)	(1.97)	(-2.18)	(1.61)	(3.34)
Operational Risk	-7.4953***	-0.0232	-7.9469***	0.0008	-7.3427***	-0.0808
	(-3.55)	(-0.23)	(-3.67)	(0.01)	(-2.79)	(-1.23)
Tobin's Q	0.0074	0.0088	0.0392	-0.0003	0.0677	0.0120*
	(0.08)	(0.78)	(0.50)	(-0.06)	(0.72)	(1.82)
Cash Flow	-0.1687	-0.0884	-0.2812	0.0154	-0.4109	0.0095
	(-0.22)	(-1.19)	(-0.38)	(0.33)	(-0.54)	(0.25)
Size	0.9506	0.0454***	0.4913	0.0589***	0.3256	-0.0095
	(0.68)	(3.01)	(0.40)	(5.31)	(0.22)	(-1.11)
Short-term Debt					0.5909	-0.1045**
					(0.68)	(-2.43)
Tax Shield	-0.2638	0.1576***	-0.1989	0.1086***		
	(-1.16)	(4.66)	(-0.92)	(4.22)		
Other Liquid Assets					1.2976**	-0.1357***
					(2.43)	(-4.05)
$Size^2$	-0.1107		-0.0779		-0.0587	
	(-1.03)		(-0.82)		(-0.50)	
Share Value Volatility	0.0263		0.0283*		0.0415**	
	(1.62)		(1.79)		(2.24)	
Old Firm	-0.3759		-0.3528		-0.2834	
	(-1.54)		(-1.40)		(1.02)	
Constant	-1.9132	-0.0871	-0.2231	-0.2441***	-0.2273	0.1884***
	(-0.42)	(-0.77)	(-0.06)	(-3.17)	(-0.05)	(2.63)
Industry and Year Effect	Yes		Yes		Yes	
Chi-square Test	557.57		371.59		220.25	
Log pseudo likelihood	328.78		772.54		1048.78	
Lambda	-2.571**		-3.0833***		1.1086	
Wald Test Indep. Eqs. (chi2)	4.59**		7.03***		1.20	
No. Observations	1568		1568		1568	

Note: ***, **, * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

The selection models reported in Tables 4 and 5 indicate that family control is more likely in firms with greater cash flow rights. The use of enhancing control mechanisms, the level of capital expenditures, cash holdings, and total financial debt, however, tend to be lower in firms with higher cash dividends and increased operational risk. The lambda statistic indicates that performance (Tobin's Q) and leverage are positively selected for family-controlled firms but negatively selected for the level of cash holdings and cash dividends.

Tables 4 and 5 show the estimation results of the outcome models for the effect of family control on corporate performance and financial policy. Family control has a negative impact of approximately 46% for corporate performance as measured by Tobin's Q but does not affect operating performance. Similarly, family control positively affects cash dividends and cash holdings by approximately 9% and 8%, respectively. The effect on leverage occurs only for long-term debt with a negative impact of approximately 6%.

The selection models reported in Tables 6 and 7 show that family management is more likely in firms with less cash flow rights and a low level of capital expenditures, cash holdings, and total financial debt. However, family management tends to be lower in firms with higher cash dividends, greater size, and greater operational risk. The lambda statistic indicates that these observable characteristics positively select family management for performance (ROA), but negatively select family management for the level of cash holdings and cash dividends.

Tables 6 and 7 show the estimation results for the outcome models of the family management effect on corporate performance and financial policy. Family management negatively impacts corporate operating performance by approximately 10% but does not affect the performance measured by Tobin's Q. Similarly, family management positively affects cash dividends, total, and long-term debt by approximately 9%, 11%, and 5%, respectively. The impact on cash holdings is negative by approximately 13%.

The selection models reported in Tables 8 and 9 show that founding family management is more likely in firms with a higher growth rate and greater share value volatility. However, founding family managementtends to be lower in firms with higher operational risk. , The lambda statistic indicates that these observable characteristics positively select founding family management for performance (ROA) but negatively select founding family management for leverage decisions.

Tables 8 and 9 show the results of the estimations for the outcome models of founding family management effect on corporate performance and financial policies. Founding family management negatively impacts corporate operating performance by approximately 14% but does not affect the performance measured by Tobin's Q. Similarly, founding family management positively affects total and long-term debt by approximately 19% and 13%, respectively. Founding family management has no impact on cash holdings but negatively affects approximately 5% of cash dividends.

The results of the selection models in Tables 4 to 9 suggest that the application of the Heckman model in this study is appropriate to treat selection bias. The estimates of the selection models for family ownership, family management, and founding family management are similar in that performance is positively selected, that is, the factors that increase the likelihood that the firm has family control or management are positively correlated with corporate performance. However, the selection bias regarding financial policy (leverage, cash holding, and cash dividends) differ depending on the family control conditions and the nature of the family management (family or founder). This suggests that financial policy differs in significance depending on the nature of the family control structure and management.

In summary, the results of the outcome models reported in Tables 4 to 9 suggest that family control and/or management has a net negative effect on corporate performance but the effect is heterogeneous for performance measures. Family control negatively affects the forward-looking measure (Tobin's Q), and family management (FM and FMM) negatively affects the backward-looking measure (ROA). The effect of family control and/or management on financial policy is sensitive to the nature and degree of family involvement. In short, the test results suggest that family control/management alone is not the source of under or over performance for Brazilian companies. Therefore, our empirical evidence corresponds with the argument (Demsetz and Lehn, 1985) that the control structure and family management are endogenously determined by corporate performance.

While the net effect of family control on leverage is negative or negligible, the net effect of management (FM and FFM) is positive. Control (FC) and family management (FM) positively affect cash dividends. The effect of founding family management on cash dividends and cash holdings differs from the family control and family management effects.

Family-controlled firms positively affect cash holdings and negatively affect long-term debt, which suggests that such firms are financially risk-averse to preserve control (risk-avoiding behavior). Similarly, family management firms negatively affect cash holdings and positively affect total and long-term debt, suggesting that aversion behavior is reduced when the family-controlled firm is also the management. Family-controlled and managed firms positively affect cash dividends, suggesting that the use of these financial policies along with leverage reduce the problems of free cash flow and discipline the insider but are not sufficient to prevent a negative

effect of family control and management on corporate performance.

The net effects of founding family management on financial policies differ significantly from the other two control and management structures. Founding family management has a positive effect on long-term and total financial debt. Additionally, founding family management does not affect cash holdings and negatively affects cash dividends. This result reinforces previous evidence that founding family management exhibits risk-taking behavior in its financial policies. The contribution of this research is the observation of this behavior through multiple financial policies.

5. Conclusions

We investigated the effect of family control/management on corporate performance and the financial policy capital structure, cash holdings, and cash dividends. Using a sample of Brazilian publicly-held companies and applying a treatment effect model to solve self-selection and endogeneity problems.

The results show that family control/management has a negative net effect on corporate performance.The family effect on financial policy is sensitive to the nature of the family relationship and involvement (control, family, or founding family management). Family-controlled firms have a positive effect on the level of cash holdings and a negative effect on the level of long-term debt, suggesting aversive behavior to financial risk to preserve control. Similarly, family management has a positive effect on the level of cash dividend and total long-term debt. Family management positively (negatively) affect cash dividends (cash holding. Founding family management has a positive effect on long-term and total debt. Additionally, founding family management does not affect cash holdings and negatively affects cash dividends. This result suggests that family firm incurs in more risk-taking behavior in its financial policies when the firm have the control and management of firm. Additionally, the results indicate that the use of these financial policies along with leverage reduce the problems of free cash flow and discipline the firm. However, that such efforts are not sufficient to prevent the negative effect of family control and family management on corporate performance.

We contribute to the literature in emerging market context, in wich the effect of family firm on performance and financial policies remains largely unexplored. This is the first study that takes into account the effect of family firm behavior through multiple financial policies.

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